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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
10/691,319	10/22/2003	Philip D. Nguyen	2003-IP-010380U1	5926				
71/407 ROBERT A. KENT P.O. BOX 1431 DUNCAN, OK 73536	7590 12/17/2009		<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">LIGHTFOOT, ELENA TSOY</td></tr></table>		EXAMINER		LIGHTFOOT, ELENA TSOY	
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			<table border="1"><tr><td>NOTIFICATION DATE</td><td>DELIVERY MODE</td></tr><tr><td>12/17/2009</td><td>ELECTRONIC</td></tr></table>	NOTIFICATION DATE	DELIVERY MODE	12/17/2009	ELECTRONIC	
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12/17/2009	ELECTRONIC							

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/691,319

**Applicant(s)**

NGUYEN ET AL.

**Examiner**

ELENA Tsoy LIGHTFOOT

**Art Unit**

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-32 and 34-77 is/are pending in the application.
- 4a) Of the above claim(s) 20-24, 27, 30, 37-41, 44, 47, 50-64 and 67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18, 19, 25, 26, 28, 29, 31, 32, 35, 36, 42, 43, 45, 46, 48, 49, 65, 66 and 68-77 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-846)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Request for Reconsideration***

The Request for Reconsideration filed on November 4, 2009 has been entered. Claims 18-32, and 35-77 are pending in the application. Claims 28-29 rejoined for examination since they depend now on elected species. Claims 20-24, 27, 30, 37-41, 44, 47, 50-64, and 67 are withdrawn from consideration as being directed to non-elected species.

Claims examined on the merits are 18, 19, 25, 26, 28, 29, 31, 32, 35, 36, 42, 43, 45, 46, 48, 49, 65, 66 and 68-77.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 35, 36, 42, 45, 48, 49, 68-70 and 72-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al (US 5,381,864) in view of Beck et al (US 4,493,875), and further in view of Sielcken et al (US 5585524) for the reasons of record set forth in paragraph 2 of the Office Action mailed on 6/5/2009.

3. Claims 43 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al '864 in view of Beck et al, further in view of Sielcken et al '524, as applied above, and further in view of Murphey et al (US 4665988) for the reasons of record set forth in paragraph 3 of the Office Action mailed on 1/14/2009.

4. Claims 45-46 and 75-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al '864 in view of Beck et al, further in view of Sielcken et al '524, as applied above,

and further in view of McDaniel et al (US 20020048676) for the reasons of record set forth in paragraph 4 of the Office Action mailed on 1/14/2009.

5. Claims 18, 19, 25, 28, 31, 32, 65, 66, 71 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al '864 in view of Beck et al, further in view of Sielcken et al '524, as applied above, and further in view of Martin et al (US 4,969,523) for the reasons of record set forth in paragraph 5 of the Office Action mailed on 1/14/2009.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al '864 in view of Beck et al, further in view of Sielcken et al '524, and further in view of Martin et al, as applied above, and further in view of Murphey et al '988 for the reasons of record set forth in paragraph 6 of the Office Action mailed on 1/14/2009.

7. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al '864 in view of Beck et al, further in view of Sielcken et al '524, and further in view of Martin et al, as applied above, and further in view of McDaniel et al for the reasons of record set forth in paragraph 7 of the Office Action mailed on 1/14/2009.

8. Claims 35, 36, 42, 45, 46, 48, 49, 68-70, 72, 73, 75 and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphey et al (US 5,128,390) in view of McDaniel et al, as applied in the previous Office Action, and further in view of Sielcken et al '524 for the reasons of record set forth in paragraph 2 of the Office Action mailed on 6/5/2009.

9. Claims 43 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphey et al '390 in view of McDaniel et al, further in view of Sielcken et al '524, as applied above, and further in view of Murphey et al '988 for the reasons of record set forth in paragraph 9 of the Office Action mailed on 1/14/2009.

10. Claims 18, 19, 25, 28, 29, 31, 32, 71 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphey et al '390 in view of McDaniel et al, further in view of Sielcken et al '524, as applied above, and further in view of Martin et al for the reasons of record set forth in paragraph 10 of the Office Action mailed on 1/14/2009.

11. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murphey et al '390 in view of McDaniel et al, further in view of Sielcken et al '524, and further in view of Martin et al, as applied above, and further in view of Murphey et al '988 for the reasons of record set forth in paragraph 11 of the Office Action mailed on 1/14/2009.

#### ***Response to Arguments***

Applicant's arguments filed November 4, 2009 have been fully considered but they are not persuasive.

(A) Applicants submit that the introduction of Sielcken fails to establish a prima facie case of obviousness for at least two reasons: a) Sielcken is non-analogous art and b) there is no reasonable expectation of success that the continuous tubular reactor disclosed therein could be applied to the subterranean treatment fluids disclosed in Nguyen and Beck.

#### **1. Sielcken is Non-Analogous Art**

Applicants submit that Sielcken is non-analogous art because 1) Sieleken is not in the field as Applicants since Sielcken relates to a method of preparing an aldehyde while recycling cobalt, while the present application relates to oil and gas field services; and 2) Sieleken is not reasonably pertinent to the particular problem with which the present invention is involved, i.e., providing an efficient means to reduce particulate density, such as in a subterranean fracturing operation. Sielcken is not reasonably pertinent to providing particulates for any purpose, and instead relates to an organic synthesis reaction, which is presumably conducted in a lab or other highly controlled space.

The Examiner respectfully disagrees with this argument. Sieleken is analogous art because Sieleken meets second criteria: Sieleken is reasonably pertinent to the particular problem

with which the present invention is involved because Sielcken relates to a problem of *mixing continuous streams of components to be mixed*.

**2. There is No Reasonable Expectation of Successfully Applying the Techniques of Sielcken to Nguyen and Beck**

Applicants submit that Sielcken relates to organic synthesis techniques that, presumably, are performed in a lab or other highly controlled space. In Sielcken, the reaction temperatures and pressures are tightly controlled, and it appears that the reactants are in liquid form (see Sielcken, col. 3, 11. 36-39; col. 5, 11. 29-36). The organic reaction scheme disclosed in Sielcken does not involve the use of anything resembling the particulates discussed in Nguyen and Beck. There is no reasonable expectation that, merely because a continuous tubular reactor is purportedly effective in Sielcken, such a reactor would be successfully used in the particulate coating process of Nguyen and Beck. For example, there is no indication that the tubular reactor could handle the solid particulates of Nguyen and Beck. At least because Sielcken is non-analogous art, and further because there is no reasonable expectation of successfully combining the relevant teachings of Sielcken with Nguyen and Beck, Applicants respectfully submit that a prima facie case of obviousness has not been established.

The Examiner respectfully disagrees with this argument. First of all, Nguyen teaches that the solid particulates are preferably suspended *in a carrier liquid* (See column 7, lines 31-32). Second, Nguyen et al teaches that the components of the treating composition can be *blended together* using generally *any* procedure which is commonly used including a *continuous stream* tub mixer. Third, according to Sielcken the components that can be mixed well in a *continuous stream* tub mixer, can also be mixed well in a tubular reactor. Clearly, the nature of components to be mixed is irrelevant, as long as they are capable of mixing well together. Therefore, one of ordinary skill in the art would have reasonable expectation of success in mixing components of Nguyen et al in a tubular reactor because they mix well in a continuous stream tub mixer.

Therefore, in contrast to Applicants argument, a prima facie case of obviousness has been established.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELENA Tsoy LIGHTFOOT whose telephone number is (571)272-1429. The examiner can normally be reached on Monday-Friday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Elena Tsoy Lightfoot, Ph.D.

Primary Examiner

Art Unit 1792

December 15, 2009

/Elena Tsoy Lightfoot/